

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TERRE G. HURST

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Appeal No. 1999-0547  
Application No. 08/615,790

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HEARD: October 23, 2000

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Before ABRAMS, NASE, and GONZALES, Administrative Patent Judges.  
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-4, 6, 7, 9-15 and 17.

We REVERSE.

### BACKGROUND

The appellant's invention relates to a blender apparatus. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to Paper No. 28.

The sole prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

McLeod <u>et al.</u> (McLeod)	3,645,505	Feb. 29, 1972
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Claims 1-4, 6, 7, 9-15 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McLeod.<sup>1</sup>

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejection, we make reference to the Answer (Paper

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<sup>1</sup>Inconsistencies appearing in the record with regard to which claims are on appeal are worthy of mention. In Paper No. 21, the examiner finally rejected claims 1-17, which were all of the claims remaining of record. The appellant appealed from the rejection of claims 1-17 (Paper No. 21 ½), but failed to list the status of the claims in the appeal brief (Paper No. 23), although all 17 claims were reproduced in the appendix. The examiner required a new brief for this and other reasons (Paper No. 24), to which the appellant filed a new brief (Paper No. 25) listing only claims 1-4, 6, 7, 9-15 and 17 in the status section as being appealed, and reproducing only these claims in the appendix. The examiner treated only claims 1-4, 6, 7, 9-15 and 17 in the answer (Paper No. 26), and again raised issues of non-compliance regarding the brief (page 10). The appellant filed yet another brief (Paper No. 28), in which claims 1-17 were listed in the status section as being under appeal, but only claims 1-4, 6, 7, 9-15 and 17 were reproduced in the appendix. It was confirmed at the oral hearing that the appellant intended to carry on the appeal only of claims 1-4, 6, 7, 9-15 and 17, and we therefore consider the appeal of claims 5, 8 and 16 as having been withdrawn.

No. 26) for the examiner's complete reasoning in support of the rejections, and to the Corrected Brief (Paper No. 28) for the appellant's arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art reference, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The rejection is under 35 U.S.C. § 102(b). The guidance provided by our reviewing court with regard to the matter of anticipation is that it is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. See In re Paulsen, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994) and In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990). For the reasons expressed below, we find this not to be the case.

The appellant's invention is directed to high-precision blending of solid particulate matter in a blender operating under low flow rates. As explained on page 2 of the specification, the prior art devices suffered from the problem of fluctuations in the flow rate when the devices were operated at low flow rates, which the appellant discovered was

caused by the fact that the ingredient supply chambers had sloped sides that supported almost the entire weight of the ingredients being fed into the auger, which resulted in upward forces being applied by the slowly rotating auger immediately above the auger. The appellant's invention overcomes this problem. It is manifested in claim 1 by the requirement that the blender apparatus comprise, inter alia, "an elongate tubular hopper . . . extending substantially vertically upward . . . and providing an unobstructed substantially vertical flow of unmetered ingredient to said auger housing, whereby substantially the entire weight of said unmetered ingredient within said tubular hopper bears upon said auger."

McLeod discloses a blender apparatus that has considerable structure in common with the appellant's claimed invention. However, McLeod has not focused upon the problem solved by the appellant's invention and, as best shown in Figure 6, the elongate tubular hoppers (134 and 136) are inclined at about thirty degrees to the vertical. While the appellant has contended that this does not qualify as being "substantially vertically" oriented, as required by claim 1, the examiner has taken the position that this showing falls within the scope of the claim because the appellant "does not show us any standard by which to measure or determine what 'substantially vertical' means" (Answer, page 6). We do not agree. When a word of degree is used in a claim, a determination must be made whether the patent specification provides some standard for measuring that degree, that

is, whether one of ordinary skill in the art would understand what is claimed when the claim is read in the light of the specification. See Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984). It is our view that this requirement is met by the appellant's specification. As stated in the paragraph bridging pages 2 and 3,

[t]he [inventive] precision low-rate metering unit includes a vertical elongate tubular hopper over the throat of a metering auger housing, with the tubular hopper being substantially longer than a transverse dimension of the throat. This tubular hopper discharges ingredients by gravity feed to the metering auger. Because the tubular hopper does not have sloped walls, as do existing circular, square or rectangular hoppers, very little of the weight of the ingredient is supported by the hopper. Rather, nearly all of the weight of the ingredient acts to force the ingredient downward, into the auger housing. The tubular hopper thus acts to increase the quantity of material which is reactive with (influenced by) the auger, thereby minimizing the effect of upward perturbations caused by the auger's rotation. This effectively increases the weight of the column (head) of material positioned over the auger and, as a result, upward forces on the column caused by the rotation of the auger are thus rendered smaller in relation to the weight of the column. By stabilizing the head pressure of material presented to the auger in this manner, the accuracy of the auger's metering is substantially improved.

In our opinion this explanation, as well as a consideration of the entirety of the specification and drawings, makes it clear that the invention is grounded in the fact that the orientation of the elongate tubular hoppers is such as to maximize the effect of the weight of the column of ingredients held therein in motivating the material downward into the auger housing. One of ordinary skill in the art thus would have understood that this is most effectively accomplished by orienting the tubular hopper if not exactly vertically, "substantially"

vertically, that is, such that the hopper walls do not intercept such a portion of the weight of the ingredients as to allow generation of the undesired perturbations by the auger. In this regard, from our perspective not only is guidance provided in the specification for defining “substantially vertically,” but McLeod represents the prior art over which the appellant believes his invention to be an improvement, in that it is clear from Figure 6 that the extent of the variation of the elongated tubular hoppers from the vertical results in the weight of the ingredients flowing therethrough being applied against the sloping walls of the hopper rather than against the auger. This is precisely what the appellant wishes not to do, and provides the basis for our conclusion that elongated hoppers 134 and 136 of McLeod do not extend “substantially vertically upward.”

Since all of the recited structure is not disclosed by McLeod expressly or under the principles of inherency, the reference is not anticipatory and we will not sustain the rejection of independent claim 1 or, it follows, of claims 2-4, 6, 7, 9 and 10, which depend therefrom. We reach the same conclusion, for the same reasons, with regard to independent claim 11 and dependent claims 12-15 and 17.

SUMMARY

The rejection is not sustained.

The decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS  
Administrative Patent Judge

JEFFREY V. NASE  
Administrative Patent Judge

JOHN F. GONZALES  
Administrative Patent Judge

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